

of her first child. Six months postpartum, duodenal ulcer disease with gastric hypersecretion became evident, and was fulminant over the next several years.

Islet cell carcinoma of the pancreas with metastasis to periaortic nodes was found at age 29, establishing the diagnosis of Zollinger-Ellison syndrome. There was persistent hypercalcemia. Probable hyperparathyroidism in the patient, and a family history of hyperparathyroidism and insulin-secreting islet cell carcinoma of the pancreas supported the diagnosis of familial multiple endocrine adenomatosis.

Following total gastrectomy the patient remained free of ulcer symptoms for a year up to the time of this report.

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Sublingual Dermoid Tumors

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A YOUNG GIRL was seen with a mass bulging up into the floor of her mouth. It had been slowly growing and lately seemed to have impeded her speech. Examination revealed the tumor to be of dough-like consistency that retained pitting after pressure on it. The diagnosis almost had to be dermoid cyst. The purpose of this paper is to renew interest in this infrequent¹ but interesting and unforgettable tumor.

Of all the dermoid cysts found in the body, 6 percent are located in the head and neck and 1.38 percent involve the floor of the mouth and tongue.² The cysts may vary in size from 4 cm to 10 cm or more in diameter and the incidence is about equally divided between the sexes (males 51 percent, females 49 percent). Most of the patients (60 percent) are under 35 years of age.

It is accepted that dermoid cysts derive from ectodermal differentiation of multipotential cells that were probably pinched off at the time of closure of the anterior neuropore. Erich³ differentiated inclusion dermoid cysts from the congenital dermoid cysts of teratoma type which arise from embryonic germinal epithelium. The true inclusion dermoid developing along embryonic clefts and lines of fusion is lined with stratified epithelium which possesses sebaceous and sweat glands and hair follicles. Practically all inclusion dermoid cysts are found about the head and neck.⁴ The mylohyoid muscle separates dermoid cysts of the floor of the mouth from those occurring in the submental and submaxillary areas.⁵ When cysts become very large, even though in the floor of the mouth, they may bulge into the submental area. Clinically they may be divided into three groups, though blending is possible: (1) The sublingual

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or genioglossal tumors present as masses under the tongue, and as they grow they push the tongue backward. (2) The geniohyoid group is made up of painless swellings in the submental area, which can give the appearance of a "double chin." (3) The lateral series appear under the mandible in the submaxillary area. As they expand, they may grow downward and toward the hyoid bone or press up into the floor of the mouth, pushing the tongue toward the opposite side. Pain is very unusual in any of the three types. Conditions that must be considered in differential diagnosis are ranula, cystic hygroma, branchial cleft cysts, lipomas, thyroglossal duct cysts, and tumors or inflammations of the submaxillary glands. The treatment is surgical.^{6,7}

The following five cases are illustrative:

Case 1. A 7-year-old Negro girl had a slowly enlarging submental mass for nearly a year. On examination of the patient's neck a cystic-like submental mass about 2x2 inches was noted. It rose into the anterior floor of the mouth, pushing back the tongue and also giving the child the appearance of having a double chin. She had some difficulty in talking.

Submental triangle dissection was performed. The tumor mass was deep to the mylohyoid muscle and was dissected from the pharyngeal mucosa. It was 3 to 4 cm in diameter, and the diagnosis was dermoid cyst. The incision healed nicely and much of the difficulty in talking subsided.

Case 2. A 27-year-old Negro man was seen because of a right submaxillary mass that had been enlarging for many months. Right submaxillary triangle dissection was performed and a 10 cm x 4 cm cystic-like doughy mass was removed from above the mylohyoid muscle. The mass pushed up into the floor of the mouth, deforming the pharynx and tongue. The diagnosis was dermoid cyst. After recovery from the operation the patient was able to eat and talk better.

Case 3. An 8-month-old Negro girl had been observed periodically since birth because of a large cystic mass in the anterior floor of her mouth. About 3 cm in diameter, the tumor pushed her tongue straight back.

Shortly after birth an incision and drainage had been performed and a dark, thick, odorous substance removed. The mass enlarged again in two weeks, and incision and draining was done again. A culture of the material, sterile at the time of the

first procedure, now grew hemolytic staphylococcus. Antibiotics were administered.

The baby was put into hospital and a seton was inserted through the cystic mass after it was thoroughly irrigated. Total excision was not performed because of severe inflammation.

At eight months of age, the cystic-like mass had again increased to a large size and complete surgical excision was urged. Under general anesthesia, the tumor mass was totally removed by intraoral dissection. The pathological diagnosis was dermoid cyst. There was no postoperative complication.

Case 4. A 23-year-old Caucasian man had noticed an enlarging mass in the right submaxillary area for one to two months. On examination a huge cystic-like mass was seen in the right submaxillary area and floor of the mouth. The patient's tongue deviated to the right. On palpation, pitting of the mass and a doughy consistency were noted. Right suprahyoid neck dissection was performed and a mass more than 9 cm in diameter was removed. The diagnosis was dermoid cyst. Two months later the patient's tongue was normal and he had no difficulties.

Case 5. The patient, a 10-year-old Caucasian girl had had a mass in the left submaxillary area for over a year, and it was slowly enlarging. Examination revealed a 3.5 x 3 cm cyst-like mass with doughy pitting consistency in the left submaxillary area, pushing up into the floor of the mouth.

Left submaxillary dissection was performed and the tumor was found to be deep in the mylohyoid muscle and pushing up into the floor of the mouth. The tumor was removed along with the submaxillary gland. The diagnosis was dermoid cyst.

Discussion

On microscopic examination of sections, all the cysts in the cases here reported were lined with stratified squamous epithelium, with some sebaceous and serous glands seen. Three of the tumors were of the lateral group, appearing under the mandible in the submaxillary area, and one was geniohyoid and one genioglossal.

Surgically it is technically far easier and safer to proceed via the neck to remove these tumor masses, some quite huge, than through the mouth. By this route the lingual and hypoglossal nerves are dissected and preserved and adequate hemostasis is obtained. The mouth is never entered and a clean operative field is left to heal rapidly.

The doughy-like consistency and the pitting on pressure that are characteristic of sublingual dermoid tumor are duplicated in no other tumor in this area. Although a differential diagnosis is necessary, once one palpates this particular kind of tumor he is not likely to confuse it with anything else.

Summary

An infrequent tumor of the floor of the mouth is a sublingual dermoid tumor. It is a large dough-like compressible mass which may elevate the tongue and make talking and swallowing difficult.

It occurs equally in both sexes and is nearly always seen below the age of 35. It is treated sur-

gically and an external approach usually is most satisfactory.

A differential diagnosis between a ranula, cystic hygroma, lipomas and tumor of the submaxillary gland can usually be made just by palpation.

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TEMPERATURE AS A SIGN OF ENDOMETRIOSIS

"In a long conversation with Doctor Alan Grant of Australia, I learned something which, I think, will be of value to all of us. Doctor Grant says that whereas body temperature ordinarily drops sharply the day a menstrual period starts, in patients with early endometriosis there is a sustained rise for a few more days and then it drops down. This seems so logical because these patients have pain—they doubtless have peritoneal irritation. I have started a study of my own patients, the first group being those with proved endometriosis—that is, proved by laparotomy. Of that group, 75 percent had a sustained rise in temperature during menstruation. The second group were those who were suspected of having endometriosis because of nodules in the cul-de-sac, but in whom disease had not been proved by visual examination. Of these, some 60 percent had a sustained rise in temperature during menstrual flow."

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